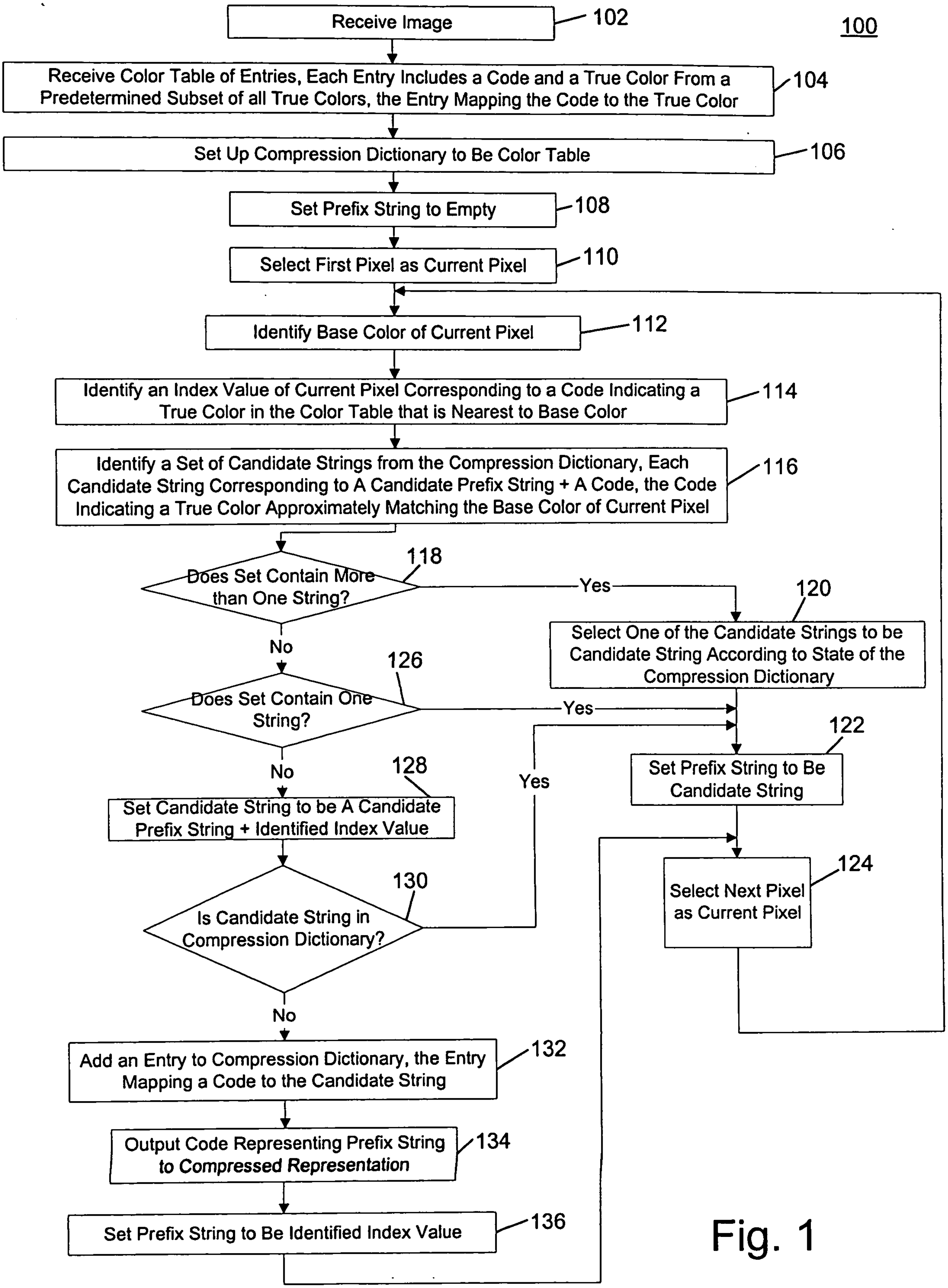
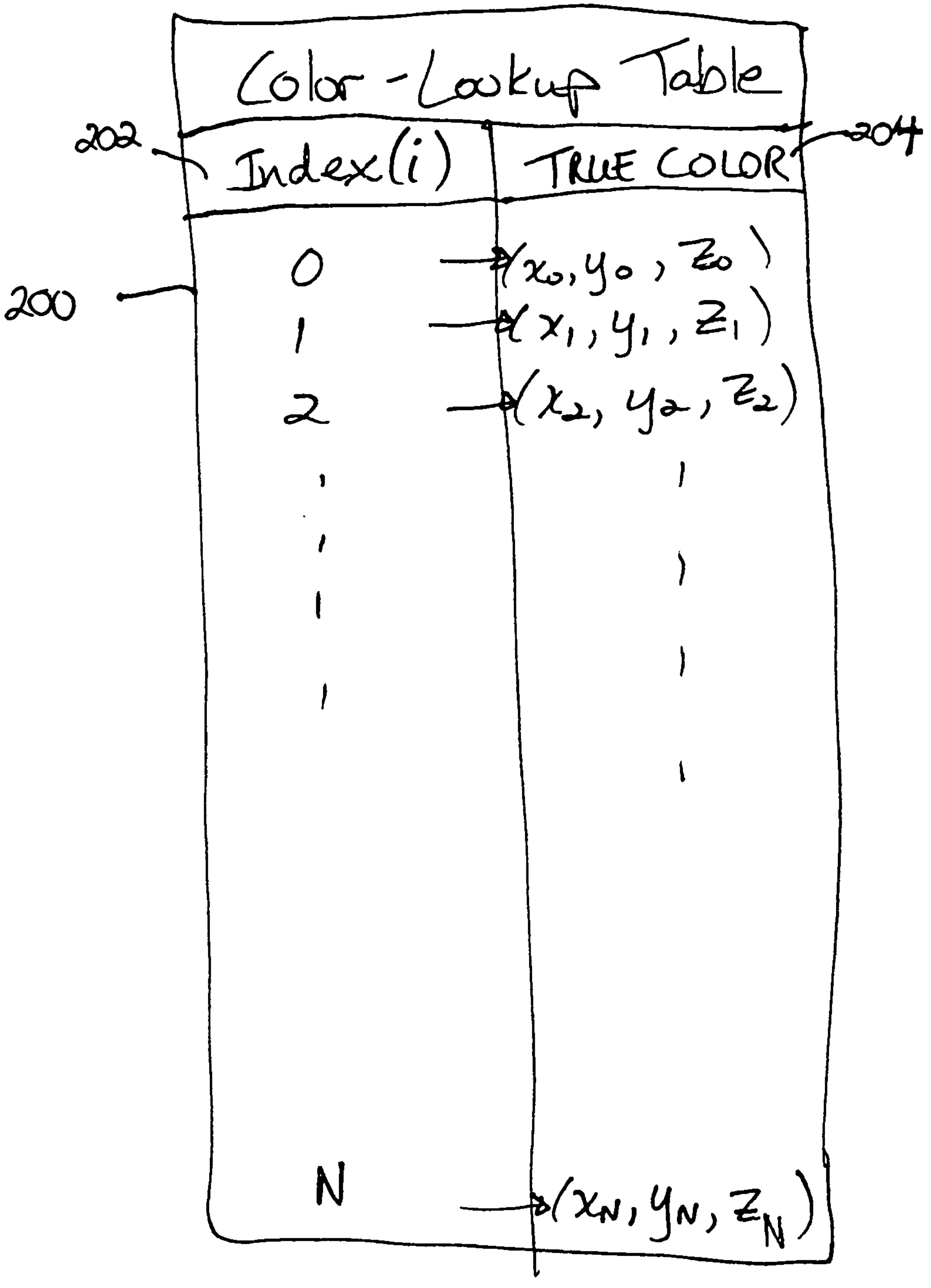

100
Receive Image
102
Receive Color Table of Entries, Each Entry Includes a Code and a True Color From a Predetermined Subset of all True Colors, the Entry Mapping the Code to the True Color
104
Set Up Compression Dictionary to Be Color Table
106
Set Prefix String to Empty
108
Select First Pixel as Current Pixel
110
Identify Base Color of Current Pixel
112
Identify an Index Value of Current Pixel Corresponding to a Code Indicating a True Color in the Color Table that is Nearest to Base Color
114
Identify a Set of Candidate Strings from the Compression Dictionary, Each Candidate String Corresponding to A Candidate Prefix String + A Code, the Code Indicating a True Color Approximately Matching the Base Color of Current Pixel
116
Does Set Contain More than One String?
118
Yes
Select One of the Candidate Strings to be Candidate String According to State of the Compression Dictionary
120
No
Does Set Contain One String?
126
Yes
Set Prefix String to Be Candidate String
122
No
Set Candidate String to be A Candidate Prefix String + Identified Index Value
128
Yes
Select Next Pixel as Current Pixel
124
Is Candidate String in Compression Dictionary?
130
No
Add an Entry to Compression Dictionary, the Entry Mapping a Code to the Candidate String
132
Output Code Representing Prefix String to Compressed Representation
134
Set Prefix String to Be Identified Index Value
136

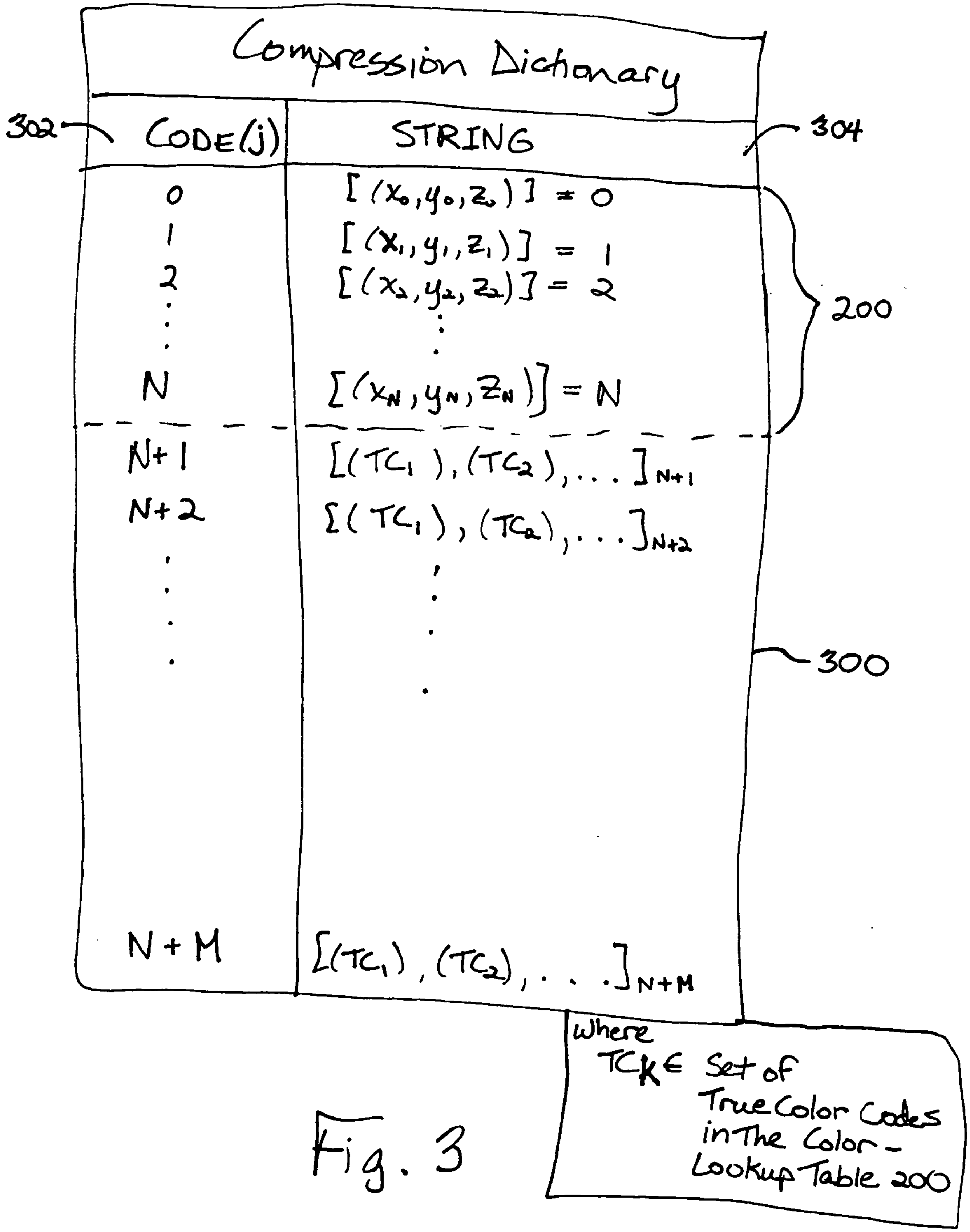
Fig. 1



Color-Lookup Table

Index(i)	TRUE COLOR
0	$\rightarrow (x_0, y_0, z_0)$
1	$\rightarrow (x_1, y_1, z_1)$
2	$\rightarrow (x_2, y_2, z_2)$
⋮	⋮
N	$\rightarrow (x_N, y_N, z_N)$

Fig. 2



Compression Dictionary

CODE(j)	STRING
0	$[(x_0,y_0,z_0)] = 0$
1	$[(x_1,y_1,z_1)] = 1$
2	$[(x_2,y_2,z_2)] = 2$
⋮	⋮
N	$[(x_N,y_N,z_N)] = N$
N+1	$[(TC_1),(TC_2),\ldots]_{N+1}$
N+2	$[(TC_1),(TC_2),\ldots]_{N+2}$
⋮	⋮
N+M	$[(TC_1),(TC_2),\ldots]_{N+M}$

Where
$TC_k \in$ Set of True Color Codes in The Color-Lookup Table 200

Fig. 3

Sample Compression Dictionary

CODE	STRING
0	[(0,0,0)] =0
1	[(5,0,0)] = 1
2	[(10,0,0)] = 2
⋮	⋮
72	[(250,75,75)] = 72
⋮	⋮
213	[(64,247,84)] = 213
⋮	⋮
N	[(255,255,255)] = 255
⋮	⋮
456	[72, 213]
⋮	⋮
N+M	[6,7,192,151]

Fig. 4

* Kernel in which the error value of a pixel is used to adjust a true color of those pixels adjacent and following in sequence that pixel

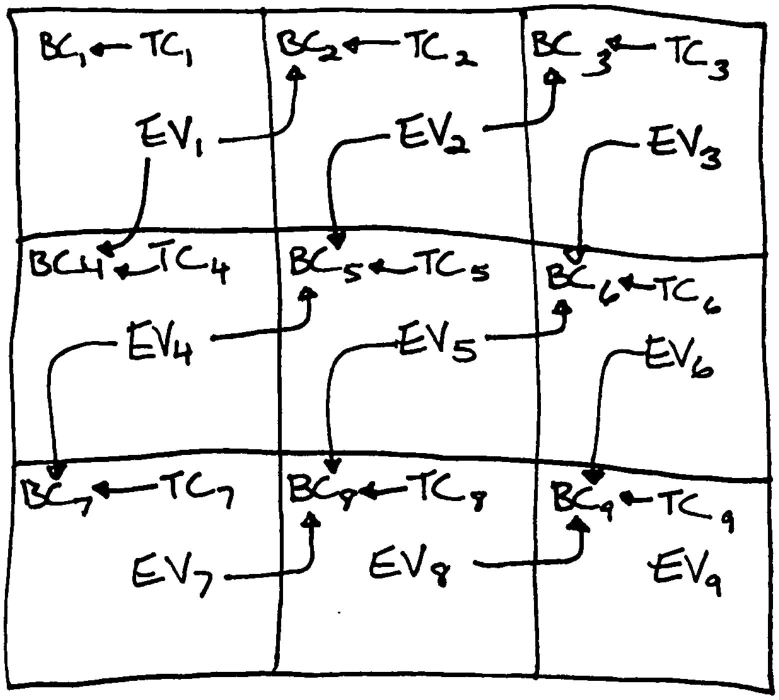


Fig. 5